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# Environmental Education: Art, Science and Ecological Criticism

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“Environmental Education: Arts, Science and Ecological Criticism,” *Social Science Research* 5 Serial No. 214 (2014), ed. and trans. Chen Liang (in the Chinese Social Sciences Citation Index [CSSCI] group), pp. 206-08, in Chinese. The following is the longer, unedited interview. Professor James Engell interview by Professor Chen Liang.

1. In terms of the philosophical and ethic principles of the status of human beings in nature in the framework of ecological criticism, which choice is better, to balance the profits of human beings and the ecological development of the environment, or, to put the ecological system in the supreme position and regard human beings as one of its elements? Will eco-centrism lead to ignorance of justice?

It is possible to view this kind of question in a way that insists on either one answer or the other. In other words, either the ecological system is in a supreme position, or you balance the profits of human beings and ecological development. I think it is important to avoid that false choice. I don't think human beings can develop and survive well unless the environment and ecological systems also are healthy. It seems to me that human life is part of the ecological system and their mutual health depends on one another. I suppose one could say that this means I'm not putting the ecological system in the supreme position. However, in that system one should regard human beings as one of its elements, so in a sense, human beings are very important elements in it. It is also true that human beings are managing almost all ecological systems in the world in one way or another; either they are managing them well or they are managing them poorly. Human beings have some effect, very often a large effect, on every ecological system in the entire world. Even in the deepest ocean trenches, there are probably radioactive particles caused by human activity. Arctic ocean ice has melted very quickly in the last twenty years because of human activity. Deserts are encroaching in many areas of the world because of human warming and global activity.

Glaciers are melting. So, it is impossible to escape the human effect on ecosystems. We are, in essence, managing the planet, whether you like it or not. One image that may be used is that we must regard the entire planet as a kind of garden or farm or field, and we must make sure it can provide for human beings for a long time into the future. We have no other farm or field. This is it. It is important for us not only to provide for our own generation, but to make sure future generations can provide for themselves, perhaps not in exactly the same way, but they still need good air, good water to drink and to use, food to grow, space to walk and an environment which encourages human health. Because if the environment becomes toxic, then it will damage every living being, including human beings. I think it is possible to achieve a balance in which there is human development and economic growth, as well as respect for the generations yet to come and the ecological systems that will be needed to feed and support those human beings. But that balance we have not yet reached. In many cases we are extracting more resources and putting more pollutants into the system than it can sustain. The burdens we are placing on ecological systems are increasing. We need to find ways to reduce those burdens. We need to find ways to tend our garden more responsibly. We need to find ways to make sure that our children will not be faced with a situation worse than the one we are facing. Now let me add one thing: the situation is different in different parts of the earth. There are some countries that are very poor; there are other countries that are mixed and have a poor population and a richer population. There are other countries that are generally richer, and richer countries have taken more resources and put more carbon dioxide into the atmosphere. It is my personal belief that there is some responsibility for this. People who are poor are going to need more power; they are going to want the things that the richer people already have. That's understandable. So the management of achieving this is going to be hard and it will create friction. It will be hard to come to agreements. But in the end, it is a global system. Globalization means that everything is

interconnected, and everything is. So, there is maybe a temporary advantage for one group of people or one country or one group of nations, but that temporary advantage will always eventually disappear, and we will find ourselves in a situation where we are affected by things that happen in every other part of the globe. I am worried about climate change because that is obviously global and it will affect poor people more than rich people. Poor people are more vulnerable. For example, in the low-lying areas near the ocean, the ocean levels rise, and then that land will be harder to farm because salt water will come in. I believe that this may be true in areas of south-east China. It is also going to be true in areas such as Florida in United States. Some island nations, small ones, may actually disappear. It will be difficult for countries such as Bangladesh, which is very low-lying; a lot of Bangladesh's land is only one meter above current sea level. The world is not taking sufficient action about climate change. The United States is not taking sufficient action. It has put a lot of carbon dioxide into the atmosphere. We should take more responsibility for its effects. That is my personal belief. Now China is putting as much or more carbon dioxide into the atmosphere as the United States. But of course China has a larger population, maybe four times as great. India is putting more into the atmosphere, and India will soon have a population as great as China's because India has no clear population policy that is effective. So we will have to cooperate. I envision that by the middle of the 21<sup>st</sup> century if we have not sufficiently cooperated, there will be a lack of human and economic progress. There will be potential stagnation and large groups of individuals, particularly in nations which are not wealthy, will be suffering more. This may cause political and social instability of a severe kind. So I believe that this first question is not a question about ecology only, it is a question ultimately about moral responsibility and ethics, and it is a question finally about politics, not only within each nation but also internationally. There are no easy answers but there are answers. With technology available today, we can do much more than we are doing, and we

should do it. But because it is often somewhat cheaper or easier not to act in that way, we are not yet acting in the best interests of the future. In my view, this is like stealing from my grandchildren, because they will have to pay that price.

2. How to evaluate the important role science and technology play to help human beings avoid ecological crisis and to facilitate ecological development?

Science and technology are truly important and we must pursue them. My son is a solar scientist. He works on questions of space weather, solar flares, things like that. I studied science when I was younger. I did not always study literature exclusively. We do not know what science will give us but it can give wonderful things. It may provide new sources of energy superior to the ones we have today. It may provide new ways to grow food more efficient than the ones we have today. It may provide new ways to protect soils. It may provide ways to protect bio-diversity. It may find new uses for things in the ocean we have not yet imagined. Science also helps us learn about eco-systems and therefore, the more we learn about them, the better we can be part of them and manage them. So it is not just technology in the sense of electronics or machinery or things that are available for human use directly, it is science in the sense of knowledge: how can we understand the natural world better and what is happening to it. Let us take one example, nuclear energy. If nuclear energy is well managed and the waste from it is well managed, then it provides a source of energy that contributes basically no known greenhouse gases to the atmosphere—but it must be well-managed because the consequence of poor management is catastrophic. There are new reactors being developed that are far safer than the old reactors. But in the US right now, there is only one new nuclear plant that is going to be built. I believe it is just under construction (late 2012). There are political problems with building nuclear plants because there is some opposition to them. So, I

do not know what will happen in the future. I understand that China and India are building nuclear plants. This seems to me to be a good thing if the waste from the plants is carefully managed, if the plants are safe, and if the people who run them are well-trained and careful. Because human beings will need more energy, not less, and because we are going to get energy from things other than fossil fuels, nuclear energy is a possible option and a promising one. We cannot get it all from the sun and from the wind. Certainly, we can get much more from the sun and wind than we are getting now. But we cannot get enough to satisfy all our energy needs now and certainly not all of those needs in, say, twenty or thirty years, when our global needs will be greater. There are other kinds of science and technology that may be very important and may provide new source of energy as well. There may be heating systems, cooling systems, irrigation systems, transport systems, communication systems, ways of managing electric grids that are far more efficient. The more that science and technology have in mind environmental or ecological applications and purposes the better. I believe science and technology have absolutely an important role to play. However, it is not by itself a complete solution. It will be necessary to have political will in order to make certain decisions about the environment, about energy itself, and it will also be important to change the way that people live. That is easy for me to say because I live in a rich country, drive a car, and have a large house. But people will need to change. So I now take the train to work. I started doing that almost ten years ago. There will be solar panels on the roof of my house starting in January 2013. I now have a very efficient fireplace stove and burn wood to help heat the house. This will not add carbon dioxide to the atmosphere any more than if the wood would decay on its own. So as much as we can, individuals should think about changing their own lives, particularly if they are living in countries that use a great deal of energy. That is something that is important. So, it is not just science and technology, it is also politics and it is also individual habit and responsibility.

But science and technology are absolutely key. The research and development of things that might have positive environmental impacts should be greatly supported. And often, I believe, too, they should be supported by the government, whether through tax incentives or profit incentives, or encouragement for development of new kinds of applications, because often applications can be used in many areas, not just environmental areas. They may be able to be used in industry. They may be able to be used in rich countries for purposes of defense. They may be able to be used for education. It is hard to say. That's the wonderful thing about science. We cannot predict what good results might occur.

3. What contributions have the ancient oriental philosophical principles, such as Taoism, Buddhism and Confucianism, made in shaping the western modern ecological theories?

Some environmentalists, particularly humanists, in the west have familiarized themselves with oriental philosophical principles. I think not yet enough, however. For example, through poets such as Gary Snyder, there is an awareness of Zen principles. He studied Zen himself when he was younger. Scholars such as Tu Wei-Ming (he was at Harvard and then became the founding Dean of the Institute for Advanced Humanistic Studies at Peking University) have written about Confucian principles related to the environment. There is an awareness of these traditions in the west, but these philosophies have something to offer not just for environmental theories but also for environmental practice. I am not an expert on this subject. But whether it is Taoism, Buddhism, Confucianism, or Shinto, it is possible to see that these philosophies have respect for and love of nature, a sense that there should be harmony between human beings and natural world. The natural world is not something to be used or disregarded; it is precious. Some western theorists have familiarized themselves, to some degree, with eastern philosophy and incorporated it, but in a more general rather than a specific way. I can think of no major ecological theorists in the United States who

have built ecological theories exclusively on oriental theories, but I can think of several who have mentioned oriental philosophies and influences. You see it in their works and sometimes they cite texts of oriental philosophers as having had an influence on them. Our schools of divinity do not necessarily teach a single religion; they may teach comparative religion; they may teach about many philosophies of spirituality and conduct. Taoism, Buddhism and Confucianism perhaps less so than western traditions, but certainly Taoism, Buddhism, Confucianism, and Shinto principles are frequently taught. Not all students study it, but many do. These students may also relate such teaching to environmental principles. It is increasingly common. It was not done so much 20 or 30 years ago, but it is more common now. Let me give one example. At the Harvard divinity school, there is a center for world religions, which means it is interested in the study of religion, or spirituality, or philosophical practices about humanity that occur anywhere in the world. This center published a multi-volume study of work on the environment. There are many essays in it that relate environmental study with Taoism, Buddhism, Confucianism, Shinto, and Islam, as well as aspects of what we might call "Asian wisdom." It is all part of the study of the relationship of human beings to the natural world, as I mentioned earlier, with someone such as the poet Gary Snyder. It shows up often in the practice of art, whether it has influences on western artists or western poets from philosophies that come from China or Japan, Korea, India, or Asian generally. This is a good thing and keeps increasing, in part because the world is more globalized. Let me give another example, which has nothing to do with ecological theories, but it has to do with a change of consciousness. Many Americans now practice Yoga. When I was a boy, no one did. Some people now practice Yoga just to stretch their muscles and be healthier, but some do it as a way to approaching their life and being in greater harmony with nature and their environment and come into a more reconciled, less anxious position of the world, and also a less selfish one. This is not necessarily an ecological theory,



but it is remarkable that so many people practice this. I would not call it exercise only, it should be a form of discipline, too. It is part of exercise, but it has to do with minds, with thoughts as well. I am certainly not an expert in Yoga, though I have done some with my wife. I think it is an example of how what is an old practice has gained attention and has done good in not only an exercise routines but in what we might call it a contemporary side of individuals. The stress on harmony that one finds in many ancient philosophies also is important. Harmony implies reconciliation. It implies a lack of violence. It implies a willingness to live together in a symbiotic fashion and to be able to do so for a continued period of time. It has what I would call a long horizon. It looks far to the future. Harmony is not only between people, but also between individuals and society as a whole. So, these are very important principles. Each society will find different paths to it because each society has a different history, and each society has different customs. But the more that people in the west learn about eastern philosophies, the more they will be sharing principles and actions that could be beneficial. A few miles from here, where I live, Henry David Thoreau lived in his cabin in the woods for a few years at Walden Pond. He was very interested in eastern philosophy. He was interested in the practice of those principles. He was interested in what he could learn about philosophies that came from Asia. I think that he read the Bhagavad Gita, for example. Texts such as the I Ching now are read in this country, the United States, far more than they used to be. So, there are more possibilities for education, for enlightenment. I think it is a positive thing. How much will these things influence ecological theories, I am not sure, and I do not know whether it has a direct influence on government policy. The more people are familiar with them, the more that will actually influence them about the way of thinking about things, and the kind of decisions that they make. If we are to be a globalized planet, then certainly we need to learn the traditions of philosophies, especially those that have survived so long, to see what is the

value in them.

4. What is the difference between the ecological principles of Transcendentalism and ancient oriental thoughts?

I do think there are similarities between Transcendentalism and ancient oriental thoughts. Transcendentalism has a great respect for nature. They felt that nature was an embodiment of spirit or mind, that is not a simple material thing to be used or abused. Therefore, they saw a connection between what they have seen and felt and those unseen and intuited on. In other words, transcendentalists were not purely materialists. They believed in intelligence, mind, and spirit as being potentially in harmony with the material manifestations of the world. As a result, they hesitated to explore the natural world without taking into account that the natural world would need to renew itself. They also had a great curiosity about the natural world. They wanted to find out the valid truth. Some of them, such as Henry David Thoreau, actually became very good scientists, very good naturalists. Thoreau wrote about seeds, and he wrote about plants and animals. He studied nature carefully and was a great observer. His journals and his late work are filled with what today we would call “field notes” of a scientist. I think he was not only a transcendentalist, but also a natural scientist. The transcendentalists also saw that it is possible for human beings to remove themselves from nature and become unhealthy, for example, if we sit in front of a computer screen 10 hours a day, if we do not exercise, if we do not get fresh air or any sunlight, and if we are cramped in our posture and our habits. Eventually we will suffer in our health if we are always filled with stress and anxiety, always rushed and worried. There is health in nature, which means contact with nature. Now, this contact does not mean you need to go to some vast, wild area that is large. It doesn't mean you need to go to the Rocky Mountains or the Himalayas, or to some deep forests. It means that even if it is small, even if it is just a little garden with a few trees, or a small stand of

bamboo, it is possible to encounter there what Thoreau called “wildness”. Not wilderness, but wildness: something natural, and the contact with it can be refreshing. It can restore oneself. The transcendentalists were also careful about what they ate. Some of them were vegetarians. Some of them ate wild berries because they thought it was more healthful, and today we know that wild berries are really very healthy for you. They contain a lot of anti-oxidants. They are very good for you. Their scientific understanding of diet and nutrition was not very great compared with ours. Yet they understood that food was natural without harmful chemicals and that food should be moderate, in other words, eating only what you need in order to do the work you need to do. Food then was local and was not a product of huge expenditures in energy, transport, chemicals, and oil. All that was to be avoided. They understood this even in the 19<sup>th</sup> century. We cannot always live like that. But I think that some of their principles about health, exercise, and diet, about being outside and not constantly cooped up in one place or in one chair or one room (working endlessly), are crucial. Those principles we now know are actually very good principles, even it means you just get up and every once in a while you stretch, or you do Tai Chi or Yoga for 15 minutes or half an hour, or you get out and take a walk. This moderation with care is exceptionally important. Now, you ask me about the differences between the ecological principles of transcendentalism and ancient oriental thoughts. I am sure there are differences. But I cannot put a finger on them because I do not know precisely enough about what ancient oriental thinking is. Most transcendentalists, not all, believe in some transcendental being, some intelligence or energy. Some of them called it god, but some of them did not. So, they had a religious dimension to their thoughts in a general way. Again, not all of them did. But I think that some ancient oriental thoughts are not particularly religious in the sense they do not always turn to one divine being and call it god. So, this is a complicated question. Buddhism is not the same as Confucianism; Confucianism is not the same as Taoism, and so forth.

But I would say that there is a sense that transcendentalism sees in nature, in the beginning, a presence that is more than merely material. There is significance for some higher form of thought or spirit. And I think that in this sense there is a significant similarity between transcendentalism and many ancient oriental thoughts, at least as far as I understand them. As for specific questions of religious belief, there are obviously differences. But that's a matter for careful study of each particular tradition.

5. It seems that, ecological criticism is itself an ideal arena, which other criticisms, especially the ones that have been marginalized, like to embrace, such as feminist ecocriticism and ethnic ecocriticism. How do you comment on the principles of combinations and their theoretical construction?

This is a very good question; let me put it into a large context. The context will be chiefly what I know about American literature, but not exclusively. Feminist criticism and ethnic ecocriticism very often understand history as a question of the relationship among people who have power with people who have less or no power. In general, women have less power than men and many ethnic groups have less power than the majority. Native Americans, for example, often have had very little power in the face of very large European and American waves of population that swept over the Americas. So, human beings also exert a great deal of power over the environment and have used that environment in ways that exploit that power. Mining coal, drilling for oil, but also shooting buffalo, shooting the passenger pigeon until it was extinct, farming the soil until much of the topsoil was lost and blown away, cutting down forests: in other words, nature has been subjected to human power in ways that sometimes were brutal, and occasionally irreversible. Therefore, it is natural for groups of individuals to see in ecological theory a story or history of power exerted over nature but also the power of one human group exerted over other human groups. So, it is the question of who has the power and how they use it. There is an analogy therefore between the way society at large has treated nature and way society has treated women and the way

society has treated minorities. Moreover, many minority groups and poor people in general, not just ethnic minorities, but people who simply don't have much money or power, often suffer from consequences of environmental degradation more than the people who have power. In other words, it is easier to place a chemical plant, particularly one that pollutes, in a community that is poor because there will be less active opposition on the whole. There will be less power to resist it. That community may also desperately need jobs. It is easier to place a large garbage incinerator in a poor area of a city rather than a rich area. The reasons for this are multiple, but I think they are obvious. So, Native Americans, other ethnic minorities, but all poor people in general, including poor people who are white in the United States, often find themselves facing pollution of their drinking water, having bad air to breathe, and toxic elements in their soil. These are things they must face every day. Whereas people who are rich and well-to-do, they are going to make sure often that they will not be near the sources of such pollution. This is one of the reasons why some ecocritical or ecological theories have been embraced by feminists and have been embraced by Native American thinkers. I recently read a wonderful study by a young woman who received her degree at Tufts University about American environmental literature that comes from Native American communities and come from ethnic minority communities. Her name is Chiyo Crawford, and her study, along with studies by others such as Elizabeth Ammons, are important ways to understand that when we speak of ecological systems and societies, society itself is an ecological system of sorts. And people who are poor or not well-to-do, or who are constantly finding themselves without power for historical reasons may find allies with theories that talk about the ways that power has been used to abuse or damage nature. So, it seems to me in many ways a natural way of alliance. Finally, with regard to feminist criticism and with regard to, for example, Native American literature and criticism, a case has been made that in general, as mothers, as nurturers, as those chiefly

responsible for bringing up children, women are naturally attuned to a certain kind of attitude toward nature which men are not; one can argue about that endlessly. On the other hand, men and women are different biologically at more levels. We can make a case that this means maybe a different attitude towards natural processes, natural protections, natural sensitivities. In the same way, most Native American communities, although in many different kinds of ways, survived the destruction of their natural environment. This is true of so many indigenous people, pre-industrial indigenous people. They rely on their environment for all their sustenance. They knew that they had to do that—always. But their children, or their grandchildren, would be something they need to protect and be conscious of. So, there is a Native American saying, a proverb, that states this: you must make sure that your use of nature will make nature still available for the same use for at least seven generations. Because of the fact that Native American communities at one time had a close relationship with a direct natural environment, and because of the argument that women may in certain ways have a relationship to the natural environment different than men's, these are some of the overarching reasons why these groups of people have a joint feminist theory or ethnic theory related to ecological theory or to eco-critical theory. It seems to me quite logical, and all goes back in the end to the exercise of power and how power is used. I think the present practice of ecocriticism is recognizing this more and more and is talking about the effect of environmental processes and degradation on different kinds of human communities, perhaps more than ecocriticism did when it first started. The kind of work I mentioned by someone like Chiyo Crawford or Elizabeth Ammons seems to be part of what Lawrence Buell has called “the second wave of ecocriticism”, in which ecocriticism is now focusing more and more on the unequal and disproportionate ways that environmental issues have affected different human communities, whether it be women, whether it be native Americans, or whether it be poor people who live in Louisiana near all those petro-

chemical plants. There is a place in that area called “cancer alley” because the rates of cancer there are markedly higher than any other place. One can easily prove that it is because of the proximity of very large refineries and chemical plants, and we often find that when such industries are located in a certain place, then rates of disease increase. Just the way rates of asthma and lung cancer are higher near industries that burn things and put their fumes into the atmosphere. This is a whole field that is tied up also with environmental law and with environmental justice. It is a field that is not the same as ecocriticism, but emerges when you link ecocriticism to feminist concerns, or to concerns of ethnic minorities, or simply to the concerns of people who are suffering disproportionately from environmental pollution.

6. Do you think ecocriticism is an effective method to re-evaluate subjectivity of human beings and, further, reconstruct the fragmentation that has been brought by postmodernism?

This is a very broad and general question, and it is a good one. But some people may disagree with the definition of postmodernism implied. I am not sure I would be able to give an answer that everyone will agree with. It does seem to me that ecocriticism asks people who care about it to re-evaluate the place of humanity in the world at large and its relationship to nature. It also asks people to re-evaluate, in many instances, the way they live their lives, their customs, what they eat, how they use their energy, all of the things by which we affect the environment and our use the environment. I think inevitably it does place a different kind of focus on the individual, but also it places a focus on society and it makes us understand in a practical way that we are organisms, living creatures whose habit and actions not only have effects on each other, and on the environment, but on the future. Things you and I do today have an effect on the world we live in decades from now. The

effect of each of these may be very small, but now that there are more than 7 billion people on the planet, 7 billion small effects added up is a very large effect. I have not seen a major re-evaluation of subjectivity through ecocriticism myself, but I have seen many hints of that insofar as a certain stance of ecocriticism calls for a more holistic or total vision of the way life is carried out. This has a tendency to reconstruct rather than deconstruct identity. I do not know whether it is done against post-modernity or not, I don't think so. But certainly, it is a different mode of thinking than an intensive theoretical scrutiny on subjectivity alone. When you place human beings as an intrinsic part of a larger environmental system, I think you do look human identity in a different way, a connected way, if you will. Postmodernism, as far as I can tell, did not pay a great deal of attention to ecological or environmental visions. The growth of ecocriticism ends up in environmental criticism which, in general, suggests that postmodernism as a movement has peaked, perhaps not passed, but has peaked. Ecocriticism and environmental criticism are looking toward a communal and global future in a way that has a different vision from that of postmodernism. So, I do see a significant development or change here. Now the question is: Is environmental or ecocriticism a major movement? Because you could say that postmodernism is or was a major movement or a major cultural change. Ecocriticism or environmental criticism in literature and the arts is, in the United States today, the fastest-growing field of approach to literary study, not the largest, but fastest-growing. More and more young people are attracted to it. Some job descriptions now call for individuals interested in ecocriticism and environmental criticism. A large number of colleges and universities have environmental programs that are interdisciplinary, and they want people from literature as well as people from biology and physics and applied science to be together in the same program. This works with varying degrees of success depending on the institution and the people involved. But what can happen—and I hope what does happen—is that individuals who



study literature will also be talking to their colleagues who study science and who study public and governmental policy. And people who are in science will feel they can learn something from people who are in literature or philosophy. I think it is arrogant to believe only humanists have the answer to environmental problems, or that only science has the answer to environmental problems. The answer is to come from all directions. Let me give you one example. The first head or chief administrator of the US Environmental Protection Agency (EPA) is a man named William Ruckelshaus. Trained as a lawyer he became head of the agency in 1970 when it was created. He has recently said that when he became the head of the agency about forty years ago, he thought that he could solve environmental problems simply by using the law. For the polluters, you would sue them. You would arrest them and the problem would be solved. But, he remarked, he soon found that the environmental problems and issues are so complex that you need to use every discipline. In an interview that was broadcast on April 16, 2010, on a radio program called "Living on Earth," here is what he said about himself and Lisa Jackson, who was in 2010 the head of the EPA: "Both Lisa and I have discovered that using one discipline to address the environment is not going to work. You have to use then all." In other words, use history to find out what happened and perhaps why it happened. Use public policy to change different regulations. Use government to enforce those regulations. Use literature and arts to represent them and to explore values in them, as well as to educate people. Use science and technology to improve the situation and understand what is going on in the natural world. He didn't want to leave any discipline behind. That was very important, and I think he is absolutely right. So, this gets away, I suppose, from the question about re-evaluating subjectivity, but it seems to me in a general way that this does answer that question. That re-evaluation of subjectivity was, to some degree, confined to the humanities, and to philosophy, what the French call "les sciences humaines." It was primarily

the concern of certain theories in the humanities, shared to some degree by some of the social sciences. To be frank, I don't think natural science or engineering cared too much about it. They did not pay much attention to postmodernism actually. But I believe that ecocriticism and environmental criticism have a capacity forge some links between the disciplines and therefore to create a renewed sense of subjectivity, of what it means to be an individual in an ecological world. And that is something I don't think that the postmodern movement spend much time trying to answer.

7. Do you have any favorite ethnic American writers who are keenly ecological-conscious?

I have a few. I think that, in general, minorities in the United States have not been as much part of the environmental movement as people who are more affluent, and that is in part perhaps because of prejudice but also because people involved in environmental movements have generally, to some degree, the leisure or luxury or money to be involved in it. Now, recently there is an increasing awakening to the fact that minority communities can ensure that they become more and more a part of environmental movement. This makes sense for many reasons, including the fact that minority communities have often suffered and continue to suffer from environmental injustice. This also means that ethnic or minority writers are becoming more recognized for what they have contributed to environmental writing. Nevertheless, they are still not yet as important in American literary study for environmental questions as some other writers. But they will gain importance as time goes on, and I think more of the literature that has been written recently, and that is being written now, will reflect an increasing sense of minority writers who are or who have been engaged with this problem. So, I mention a few examples: David Treuer, who is a Native American, is one example. He is still of course living and writing and teaching. Leslie Marmon Silko, another Native American, Louise Erdrich, and some older writers, meaning writers

from the past. Earlier this year I ran across a writer I had never encountered before, Maria Cristina Mena. She was a writer whose background is essentially that of a Mexican-American or Hispanic American. Her short stories are interesting from an environmental point of view and in part, too, because they treat the issue of power that I mentioned earlier, the power that certain communities and groups exert over others. I also came into contact with a Japanese American writer Karen Tei Yamashita, and her novel *Tropic of Orange* about the Nisei, the Japanese-Americans interned in camps during the second world war and how they were taken from their farms. Eventually many of them must move to the city. You can say that their story engages environmental issues a great deal because there is disruption of their farms and land, and eventually they find themselves in cities. Some of them are in Los Angeles. Another novel by Yamashita is *Through the Arc of the Rain Forest*. So, there are Native American and minority writers who write very well and whose fiction and stories are successful. There are poets, too. There are a great many writers who are not ethnic or minority writers and I could give a list of those. But the point I want to make is that ethnic and minority writers are now being seen as more and more important in this second wave of ecological criticism and writing. I think it is important to continue along this path because it ties back with the earlier question you posed about feminism and about ethnic ecocriticism. It is also interesting to look at environmental issues, such as climate change, through the lens of socio-economic class. One recent novel by Barbara Kingsolver, who has written a great deal about environmental issues in fiction and non-fiction, does this. It is called *Flight Behavior*.

8. How will ecocriticism affect the relationship between oriental culture and occidental culture? It has the potential to bring these two broad streams of world culture into closer contact. I hope it does. In that way, not only can people who live in and primarily know one part of the world better

understand people who live in another part of the world, all people should be able to improve their culture by paying attention to what is done elsewhere. After all, “culture” should ultimately mean a sense of improvement or betterment, not simply what is done or practiced. Even if ecocriticism deals with local issues or with literature that is centered on one place, often its insights can be applied to other localities—not copied mindlessly, but applied with respect for the history and habits of each locality.

9. How do you comment on the term “ecophobia”, which is believed by some scholars to be the psychological motive leading to the ecological crisis? It’s not a term with which I’m particularly familiar. Some individuals simply are misinformed about environmental issues; others have a strong personal economic interest of gain that makes it easier for them to ignore or deny environmental issues. Others identify any kind of environmental concern as part of a political ideology with which they disagree. Some people simply don’t have the imagination to consider what the future consequences of current habits and actions might be. So, there seem many complex human factors that have contributed to our present environmental conditions. I doubt that they can all be lumped under one term such as “ecophobia.”
10. Are there any essential theoretical problems that are to be resolved in contemporary ecocriticism?

First, it is hard to separate theoretical problems or issues from the practice and production of literature itself. In other words, theoretical attention is mirrored in the creative writing and vice versa. I think the two will be seen most fruitfully to come together as both theory and practice. The theory cannot be imposed as a set of external concepts. It needs to grow from the practice of the literature. But then, of course, once criticism and theory are established, as they are now, they will have influence on creative and

imaginative writing itself. So the literature I mentioned by individuals that I named earlier, and also by many other individuals, is being taught more and more. Second, the world these writers envision and represent is a total world, not just a “literary” world. To understand it and to think about it in any critical way also means giving some attention to history, religion, philosophy, politics, and economics. So, it seems to me the theoretical problem that I would identify is that ecocriticism should not become too theoretical with its own terminology. It should open itself up in knowledge and theory to other areas of study and experience. Because it is only by that avenue that ecocriticism will attract wider attention and contribute enough to affect the larger dialogue about environmental issues. It has a negative possibility, a liability, of becoming too self-enclosed in the way that it treats things. The more it opens itself up to social, political, economic, and historical questions, the better. It needs to be as interdisciplinary as possible, not to specialize increasingly as its own narrow discipline. One effort of this in the United States is ASLE, the Association for the Study of Literature and Environment. It publishes a journal called *ISLE*, which stands for Interdisciplinary Studies in Literature and the Environment. The challenge, of course, is to be interdisciplinary not in a superficial way but in a manner that is responsible and informed. This is hard but worthwhile—even crucial.

11. Do you have any other comments besides my questions?

I want to thank you for these excellent questions. I believe that literary study has the capacity to link itself to environmental study and to help make real and significant changes in the world. Not just esthetic changes, not just academic changes, but to help motivate people who care about the subject—about literature and also about our environment—to take part in shaping, at the local level, at the regional level, and if possible, even at national level, the way in which human beings conduct their affairs, their habits, and their businesses. That may mean being involved with something very small and local, but it also means the collective power to affect larger policies and

regulations. So, I see the study of ecocriticism as not only valuable for literature, and not only for certain group of people who read literature. I think it has a value for societies and nations as a whole. Literature and its criticism can integrate the results of knowledge from a number of different fields and different kinds of experience. True, it is only one path, but we must use every path to get to the destination of an improved world, one that our children and grandchildren will find better, not worse, than it is now. That would be my hope.